3   between every winding slot and to remove peak current

4   between said excited phase and said inexcited phase.

Please replace claim 5 with the following:

1   5.   (AMENDED) A constant-power brushless DC motor

2   comprising:

3   a stator constituted by at least two phases, each of

4   the phases having plurality of windings wound in a

5   distributed, parallel, winding and being independently

6   connected with the each H-bridge circuit of a power

7   switching stage without inter-connection;

8   a rotor rotatably coupled to said stator and having an

9   even plurality of permanent magnet poles, the motor having

10 said permanent magnet rotor in which the magnetic

11 arrangement is radial to the shaft and integral to said

12 rotor laminations, said rotor laminations having empty

13 spaces between every each magnet in said rotor; and

14   a commutation encoder externally set to one side of

15 the shaft of said rotor and having sensing regions and

16 nonsensing regions, wherein the number of phases among the

17 at least two phases, which will be excited, is determined

18 by the distance of each sensing region, wherein the

19 distance of said sensing regions being determined by the

20 following formula:

21

22   n   total phases

23   1, 2, 3, …   a   excited phases,

24   1, 2, 3, …   b   inexcited phases

25

26

$$\frac{2\pi}{\text{the number of poles in the rotor}} \times \frac{(n-b)\,\text{phases}}{\text{the number of phases}}\,(\text{degrees})$$

2

27

28   the number of said sensing regions is determined by the

29   following formula:

30

31   $$\frac{\text{number of poles}}{2} \quad ;$$

32

33   photo sensors positioned operatively with said

34   commutation encoder and constituted so that two

35   photo-sensors are provided with respect to each phase, each

36   of said photo-sensors in the at least two phases being

37   arranged, in turn, one by one at intervals of predetermined

38   shaft angle so as to produce a positive pulse when

39   registered with said sensing of said commutation encoder,

40   and said interval in determined by the following formula:

41

42   $$\frac{2\pi}{\text{the number of poles in the rotor}} \times \frac{1}{\text{the number of phases}} (\text{degrees}) \quad ;$$

43

44   an electronic commutator constituted such that an

45   H-bridge is connected across the windings of each phase of

46   said stator, a half H-bridge of each phase being connected

47   to one photo-sensor so that each phase is provided with two

48   photo-sensors so as to determine the current direction

49   according to the positive pulse of the photo-sensors,

50   thereby flowing the alternating current of part-square wave

51   through the windings to drive the motor, and an electric

52   power source connected in parallel to each phase of said

53   electronic commutator.

      Please add the following new claims:

B^3

1   7.   (NEW)   The motor according to claim 3 wherein

2        $n > b > 1$, n corresponding to the number of phases, b

3 corresponding to the number of inexcited phases.

1   8.   (NEW)   The motor according to claim 1 wherein

2   constant power is delivered by the motor.

1   9.   (NEW)   The motor according to claim 5 wherein

2        $n > b > 1$, n corresponding to the number of phases, b

3 corresponding to the number of inexcited phases.

1   10.   (NEW)   The motor according to claim 5 wherein

2   constant power is delivered by the motor.

In accordance with 37 C.F.R. § 1.121(c)(ii), a separate sheet(s) with the rewritten claims marked-up to show the changes made to the previous version of the claims, is filed herewith.

REMARKS

In view of the foregoing amendments and the following remarks, the applicant respectfully submits that the pending claims are not ambiguous under 35 U.S.C. § 112 and are not unpatentable under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicant respectfully requests that the Examiner contact the undersigned to schedule a telephone